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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/642,675

08/19/2003

William L. Parks III

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04/12/2005

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EXAMINER

WALK, SAMUEL J

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

1X

<b>Office Action Summary</b>	<b>Application No.</b> 10/642,675	<b>Applicant(s)</b> PARKS ET AL.	
	<b>Examiner</b> Samuel J Walk	<b>Art Unit</b> 2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/19/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

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**DETAILED ACTION**

***Claim Objections***

1. Claims 3, 4, 5-9 and 11-15 objected to because of the following informalities: Claim 1 established the threshold of "is equal to or is beyond a predetermined alarm temperature" then subsequent dependent claims establish a similar threshold. It is understood that the subsequent dependent claims are referring to the same threshold but no antecedent basis is established. Examiner suggests amending the dependent claims to read "is equal to or is beyond **the** predetermined alarm temperature" for mere clarification. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 16-17, 19-21 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Toole (US 6130602).

In reference to Claim 1, O'Toole discloses a radio frequency data communication device wherein claimed base

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reception unit met by interrogator 26, see Col. 37 lns 31-49; claimed remote emission unit met by radio frequency data communication device 12, see Col. 35 lns 50-56; claimed temperature dependent material met by temperature sensor (tsn) which has inherent temperature dependent material in order to effectively and accurately measure, see Col. 103 lns 55-67; claimed threshold dependent alarm met by threshold violations in alarm mode, see Col. 52 lns 32-35.

In reference to Claims 16-17, O'Toole further discloses that the communication is radio frequency which meets claimed electromagnetic waves and radio frequency electromagnetic waves, see Col. 35 ln 50.

In reference to Claim 19, see above rejection in reference to Claim 1. In addition, it is inherent that radio frequency data communications device 12 is a tag/transponder.

In reference to Claim 20, see above rejection in reference to Claim 19. In addition, communication device 12 includes at least one antenna for transmission and reception, see Col. 35 lns 50-56. Interrogator 26 further includes antenna 28 for transmission and reception, see Col. 37 lns 35-36.

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In reference to Claim 21, O'Toole further discloses device 12 operates over a wide range of carrier frequencies from 915 MHZ to 5800 MHZ, see Col. 42 lns 37-41.

In reference to Claim 34, see above rejection in reference to Claim 1. In addition, it is inherent that the device and system disclosed by O'Toole would also be implemented as a method.

4. Claim 31 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lesho (US 4844076).

In reference to Claim 31, Lesho discloses an ingestible size continuously transmitting temperature-monitoring pill wherein claimed crystal met by temperature sensitive crystal 16, see Col. 2 ln 67; claimed antenna met by inductive coil 20, see Col. 3 ln 20.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2 and are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole in view of Brune (US 6059733).

In reference to Claim 2, O'Toole discloses an RF communication device which monitors the temperature according to threshold of different objects and people. It would be advantageous to include means of displaying the alarm situation to a base location so that proper personnel and monitoring users could quickly and effectively intervene. O'Toole does not teach of transmitting the alarm signal to a base station. However, Brune teaches of a method of determining a physiological state of a ruminant animal using an ingestible bolus wherein the bolus transmits a message containing the cow ID number, time stamp data and temperature data, including surpassed alarm thresholds, to a stationary base unit, see Col. 7 lns 38-52. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Brune into the system of O'Toole because alerting the proper monitoring personnel of an alarm state would allow them to quickly and efficient respond and intervene therefore reducing the risk of injury, illness, etc.

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7. Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole in view of Lesho.

In reference to Claim 3, O'Toole discloses an RF communication device which monitors the temperature according to threshold of different objects and people. O'Toole discloses interrogator 26 which sends an interrogation signal or command 27 via antenna 28 and RF device responds by transmitting a responsive signal or reply 29. O'Toole does not disclose that reply signal 29 is a radio frequency dependent and corresponding to a specific monitored temperature. However, Lesho teaches of an ingestible size continuously transmitting temperature-monitoring pill wherein the frequency of the amplified signal is the same as the frequency telemetered by the pill and therefore contains the information needed to measure temperature which is monitored directly using a temperature sensitive crystal 16. The digital output from the comparator is coupled to a frequency counter 60, or a personal computer which counts the frequency of the emitted signal and performs the calculation to display the temperature sensed by the pill, see Col. 4 lns 56-68. Therefore, it would have been obvious to one having

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ordinary skill in the art at the time the invention was made to incorporate the teachings of Lesho into the system of O'Toole because using a temperature sensitive crystal necessitates frequency dependence to provide a capacitive load, i.e. a phase lagging load, which is necessary for the inverter to oscillate and therefore properly transmit the monitored data.

In reference to Claim 7, see above rejection in reference to Claim 3. In addition, one having ordinary skill in the art would have readily recognized that an ingestible pill would provide the temperature readings at any place along the digestive tract and that the combined system of O'Toole and Lesho would institute an alarm upon the determination of an abnormal temperature.

In reference to Claim 8, see above rejections in reference to Claims 3 and 7. In addition, one having ordinary skill in the art would have readily recognized that a swallowed temperature monitoring pill would relay the measured temperature upon interrogation including when the pill is located in the stomach and therefore would relay temperature related data according to its surroundings, including lavage fluids that may be present.



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8. Claims 4-5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole in view of Lesho and in further view of Lastinger (US 6104311).

In reference to Claim 4, O'Toole and Lesho disclose a temperature monitoring communication device that utilizes a temperature sensitive crystal. O'Toole and Lesho do not disclose that the base unit transmits a series of interrogations signals in which the remote unit only responds to one specific frequency. However, Lastinger teaches of a information storage and identification tag wherein reader 32 uses one of two methods for transmitting query signals and reading the frequency of a tag's response signal. In the "pulse" method, reader 32 transmits short signals, or pulses, over a range of frequencies including the frequency ranges of each antenna. A resonant circuit receiving one of these query signals at its operating frequency begins to resonate and continues to resonate after the query signal ends, at which point reader 32 detects the response signal, see Col. 8 lns 33-41. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made would have incorporated the teachings of Lastinger into the system of O'Toole and Lesho because using a

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pulsing, or probing, method of reading allows multiple tags to reply without interference and allows the user to group readable items by the resonant frequency if desired.

In reference to Claim 5, see above rejection in reference to Claim 4. In addition, one having ordinary skill in the art at the time the invention was made would have readily recognized that using a pulse method would necessitate pausing intervals because transmitting one frequency at a time would result in less noise, interference and cost and the pausing intervals allow the reader the necessary time to receive the transmitted data from the tags.

In reference to Claim 18, O'Toole and Lesho do not specifically disclose the use of a resonating wave emitter. However, Lastinger teaches of resonant circuit which resonates until the reader 32 detects the response signal. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a resonator circuit, or resonating wave emitter, because it is a readily available and widely used circuit component which permits the transmission of data.

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9. Claims 6, 9-10 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole in view of Smrke (US 5951900).

In reference to Claim 6, O'Toole discloses a temperature monitoring communication device and system wherein tags are placed on a variety of objects including goods, items, persons, animals or substantially any moving or stationary and animate or inanimate object. O'Toole does not specifically disclose the placement of the temperature monitoring device on a heated vessel. However, Smrke teaches of an automatic temperature measurement based power control device wherein portable unit 20 with temperature sensor 32 that is detachable mounted on the lid 21 of the cooking port 23, see Col. 3 lns 20-28 and Col. 4 lns 1-5 and 14-21. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Smrke into the system of O'Toole because monitoring the temperature of a cooking vessel would allow the user a more convenient means of cooking.

In reference to Claim 9, Smrke further teaches that universal electronic control unit 28 which includes

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temperature sensor section 32 is mounted in the refrigerated area of a refrigerator, see Col. 4 lns 22-25.

In reference to Claim 10, see above rejection in reference to Claim 9. In addition, one having ordinary skill in the art at the time the invention was made would have readily recognized that the size and shape of the refrigerator could be modified for portability and application specific needs and therefore a small refrigerator, cooling device or bag would be used to transport organs and would necessitate means for monitoring critical temperatures used to maintain the viability of the organs being transported.

In reference to Claims 28-29, see above rejections in reference to Claims 1 and 6.

In reference to Claim 30, see above rejection in reference to Claims 1 and 6. O'Toole discloses while in alarm mode, alarm is activate when predetermined thresholds are met which would obviously include at least one predetermined temperature.

10. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole in view of Tuttle (US 5995898).

In reference to Claim 11, O'Toole discloses a temperature monitoring communication device and system wherein tags are placed on a variety of objects including goods, items, persons, animals or substantially any moving or stationary and animate or inanimate object. O'Toole does not specifically disclose the placement of the temperature monitoring device at a automotive component. However, Tuttle teaches of a RFID system in communication with the vehicle on-board computer wherein the system 16 includes RFID circuitry 14 which communicates with engine temperature sensor 32, see Col. 3 lns 34-40 and lns 56-66. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Tuttle into the system of O'Toole so that a communication device is placed on the engine to ensure proper engine temperature and ultimately lengthen the service life of the vehicle.

In reference to Claims 12-15, Tuttle further discloses that any other sensors can be employed with the vehicle on-board computers. Therefore, one having ordinary skill in the art would have readily recognized that the placement of temperature monitoring communication devices would be placed anywhere the user and manufacture would need to

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ensure proper temperature including the tailpipe, catalytic converter, tires, braking components and even on other transportation vehicles such as airplanes, boats, helicopters, etc. so that proper temperatures are maintained throughout the systems ensuring longer lifetimes.

11. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole in view of Lesho in view of Olivas (US 6646567) and in further view of Lichtblau (US 3810147).

In reference to Claims 22 and 25, see above rejection in reference to Claim 3. O'Toole and Lesho disclose a transponder and interrogator system utilizing a crystal to measure and monitor temperature readings. O'Toole and Lesho do not disclose the transponder's receiver/transmitter is crystal-based. However, Olivas teaches of a wireless telematic thermometer wherein quartz crystal 3 and 8 are used to control internal oscillation, see Col. 4 lns 10-16 and 56-61. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Olivas into the system of O'Toole and Lesho because

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crystal-based receiver/transmitters are more efficient and accurate circuitry components. O'Toole, Lesho and Olivas do not disclose using frequencies 27.12 MHZ and 13.56 MHZ. However, Lichtblau teaches of an electronic security system wherein frequencies 13.56, 27.12, 40.00 and 905 MHZ are utilized, see Col. 4 lns 61-62. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Lichtblau into the system of O'Toole, Lesho and Olivas because it allows the manufacturer and/or user to use lower frequencies if lower noise and interference is desired or higher frequencies if longer transmission distance is desired.

In reference to Claims 23-24 and 26-27, see above rejection in reference to Claims 22 and 25, more specifically quartz crystals 3 and 8.

12. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lesho in view of Olivas.

In reference to Claim 32, see above rejection in reference to Claim 31. Lesho does not disclose the transponder's receiver/transmitter is crystal-based. However, Olivas teaches of a wireless telematic thermometer

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wherein quartz crystal 3 and 8 are used to control internal oscillation, see Col. 4 lns 10-16 and 56-61. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Olivas into the system of Lesho because crystal-based receiver/transmitters are more efficient and accurate circuitry components.

13. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lesho in view of Olivas and in further view of Lichtblau.

In reference to Claim 33, Lesho does not disclose the frequency of 13.56 MHZ. However, Lichtblau teaches of an electronic security system wherein frequencies 13.56, 27.12, 40.00 and 905 MHZ are utilized, see Col. 4 lns 61-62. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Lichtblau into the system of Lesho and Olivas because it allows the manufacturer and/or user to use lower frequencies if lower noise and interference is desired or higher frequencies if longer transmission distance is desired.



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### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hoek (US 2001/0045899) discloses passive biotelemetry. Marshall (US 6632175) discloses a swallowable data recorder capsule medical device.

### ***Correspondence***


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel J Walk whose telephone number is (571) 272-2960. The examiner can normally be reached on M-F: 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Thomas J. Mullen, Jr.  
Primary Examiner  
Art Unit 2632